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VILLA UMBERTO I
1938

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(XXVIITH YEAR)

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ROME — PRINTING OFFICE ' CARLO COLOMBO '

CHRONICLE OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

Participation of the Institute in international meetings. — The International Institute of Agriculture, represented by the Delegates to the Permanent Committee, the Secretary General or officials of the Institute, took part in the following international meetings in addition to those mentioned last month.

1. – *Vth. International Public Hygiene Conference* (Geneva, June 14-16, 1938). — M. Wagnière, an honorary member of the Permanent Committee and a former delegate of Switzerland, and M. Ray, Director of the Technical Bureau, represented the Institute at this Conference.

2. – *VIIth. Meeting of the Committee of Statistical Experts* (Geneva, July 4-9, 1938). — The Committee of Statistical Experts, created by the international convention on economic statistics, held its seventh meeting at Geneva on July 4-9. A considerable part of the discussions was devoted to an examination, in the light of many observations received by Governments, of the minimum international programme for population statistics which had been prepared at the 1937 meeting and transmitted to Governments for criticism and discussion.

The efforts of the Committee to secure the adhesion of all countries to a minimum international programme, which would ensure comparability between one country and another, cannot fail to be of interest to the International Institute of Agriculture, in view of the great difficulties that arise out of the present situation of international population statistics and the different principles on which they are based, when an attempt is made to draw conclusions as to the relative importance of the agricultural population in the various countries.

Another question of interest to the Institute that was discussed at this meeting was that of wood statistics. The Committee had prepared a report containing suggestions for the improvement and standardization of these statistics, with special reference to the industrial and commercial utilization of wood. It referred these suggestions for further study in the light of the observations and proposals of the Governments on the preliminary report, as a result of which the minimum programme previously drafted was simplified and reduced. The new report, which supplements the work of the International Institute of Agriculture in the field of forestry statistics, was transmitted to the Council of the League of Nations for communication to all Member and non-Member States with a request that the recommendations of the Committee of Statistical Experts should be put into force.

The meeting finally discussed *statistics of housing and building*, the application and revision of *the minimum list of commodities for international trade statistics, indices of industrial production, financial statistics* and *statistics of international balances of payments*.

The International Institute of Agriculture was represented at the meeting, as on previous occasions, by M. Dore, Director of the Bureau of Statistics.

3. – *General Assembly of the International Confederation of Agriculture* (Prague, July 5-12, 1938). — The principal result of this Assembly was the final preparation of the programme of the *XVIIIth. International Agricultural Congress* which will be held at Dresden (Germany) on 6-12 June 1939. The Congress will comprise nine Sections, namely the eight traditional Sections and a newly formed ninth Section for *Agronomic Sciences*. The questions on the programmes of these nine Sections are interesting and varied.

The Assembly also examined the *point of view of agriculture on the possibility of securing a general reduction of the obstacles to international trade*. A detailed resolution was passed, covering the essential points of the problem. The resolution expresses the view that a return pre-war conditions of free trade is impossible and that there are three possible solutions:— (1) *the international organization of agricultural producers and of marketing* by the development of *plurilateral and bilateral agreements between producers sanctioned by the Governments* and the prompt realization of these agreements for the trade in *oils and fats* which are considered as basic commodities for agriculture; (2) regulation of import duties, quotas, etc., preferably by means of *trade treaties*; and (3) *comprehensive agreements* to settle currency problems.

Two special Commissions of the Assembly—that on agricultural cooperation and that on agricultural labour—held meetings at the same time. It was resolved that questions affecting: (1) the functions of agricultural cooperatives in domestic and foreign trade in vegetal and animal products, and (2) the acquisition of farms and property by agricultural labourers, should be submitted to the Dresden Congress.

4. – *IXth Session of the Wheat Advisory Committee* (London, July 14-16, 1938). — The IXth. Session of the *Wheat Advisory Committee* was held in London on July 14–16. 16 of the 21 signatories of the London agreement were represented. These included 8 exporting countries (Australia, Canada, United States, Hungary, Poland, Romania, U. S. S. R., Yugoslavia) and 8 importing countries (Germany, Belgium, France, Italy, the United Kingdom, Sweden, Switzerland, Czechoslovakia). The Agenda of this meeting included the following items:— (1) to consider the Secretariat's report on the present and prospective world wheat situation; (2) to consider the proposal by the Government of the United States of America that the Wheat Advisory Committee be continued for two years beyond July 31, 1938; (3) to consider (should the proposal to continue the Committee be agreed to) the advisability of authorizing the Secretariat to publish once or twice a year their review of the world wheat situation.

On the invitation of the Chairman, who referred to the assistance accorded by the International Institute of Agriculture, a summary of *the situation of the world wheat market in the coming year* was presented. This report emphasized that in 1938-39 the exportable supplies of the surplus-producing countries seem likely to be twice as large as the probable world import demand and that, consequently, the carryover to 1939-40 will be considerably increased to a level about as high as the maximum reached on the eve of the great wheat crisis. The International Institute of Agriculture was represented by M. Capone, Chef de Section of the Bureau of Statistics.

5. – *International Geographical Congress* (Amsterdam, July 18-29, 1938). — The International Institute of Agriculture was represented at this Congress by M. Augé-Laribé and Mr. J. Clyde Marquis.

6. – *XIIth. International Horticultural Congress* (Berlin, August 12-17, 1938). — The International Institute of Agriculture was represented by Dr. van Rijn, Chief of the Delegation, M. Augé-Laribé and the Secrerary General, accompanied by M. Schubring, rédacteur of the Bureau of Statistics. The senior representative of the Institute spoke at the opening meeting and referred to the interest taken by the Institute in horticultural questions, an interest which is reflected in the organization in the Institute of a Horticultural Section. At one of the plenary meetings, the Secretary General read a communication from M. Ruys on the organization of the Horticultural Section at the Institute and the invitation to M. Ruys to direct this Section.

7. – *International Conference of Agricultural Economists* (Ste. Anne de Bellevue, August 21-28, 1938). — Professor Barton, Under-Secretary of State for Agriculture in Canada and a member of the C. I. S. A., represented the International Institute of Agriculture, assisted by Mr. Freifeld, rédacteur of the Bureau of Economic and Social Studies.

8. – *International Conference of Commerce: XXIIIrd. Plenary Assembly* (Warsaw, September 5-8, 1938). — Though not represented, the Institute took great interest in this meeting, a resolution being presented by M. Fudakowski on the part to be taken by the Institute in an international wheat policy.

9. – *XXIVth. Session of the International Institute of Statistics* (Prague, September 11-13, 1938). — The XXIVth. Session of this Institute was held in Prague or September 11 to 13. The International Institute of Statistics was represented by M. Dore, Director of the Bureau of Statistics and a member of the International Institute of Statistics. Several of the questions discussed are of direct interest to the International Institute of Agriculture. These included:— (1) a report by M. Bunle entitled, " Rural population: the adoption of a definition suitable for international usage "; (2) a report by MM. Rubes and Ulmer " Agricultural statistics in countries where such statistics present special difficulties (particularly colonial countries); (3) a report presented by the International Institute of Agriculture on the World Agricultural Census of 1940.

10. – *VIth. International Conference on wood utilization* (Brussels, September 15-17, 1938). — The Institute appointed an observer to this Conference.

11. – *XIVth. International Conference of Documentation* (Oxford, September 21-26, 1938). — M. von Frauendorfer, the Librarian, represented the Institute at this Conference.

12. – *Ist. International Fertilizer Congress* (Rome, October 3-6, 1938). — The Ist. International Fertilizer Congress, organized by the International Federation of Agronomic Technicians (F. I. T. A.), was held at the International Institute of Agriculture on October 3-6. The Institute was represented by all the members of the Permanent Committee present in Rome, by the Secretary General and by the Director of the Technical Bureau, assisted by officials.

The proceedings of the Congress were divided into four Sections: (1) Raw material and the production of fertilizers; (2) The technique of fertilization; (3) Economics; (4) Propaganda.

The following are some of the resolutions adopted by the Congress.

" The Congress recommends to the consideration of scientific workers that the most careful attention should be given to the present tendencies of fertilizer consumption in order to ensure that soil fertility should not suffer from the insufficiency of any elements useful to the plants cultivated."

" The Congress expresses the wish that an International Committee be created for studying all questions regarding the technique of nitrogen, phosphatic and potassic fertilization ".

" The Congress, having taken note of the report of M. Dore on the statistics of production, commerce and consumption of fertilizers, earnestly requests Governments to support the efforts of the International Institute of Agriculture aiming at the improvement and standardization of these statistics".

" The Congress, having heard the report of M. Jerna on the organization, methods and forms of fertilizer propaganda, notes the results achieved in the countries which have Committees or organizations entrusted with propaganda for the scientific use of fertilizers.

" Having regard to the very satisfactory results secured by the national prepaganda committees for the use of fertilizers, the Congress recommends that the establishment of committees of the same nature should be considered in countries where such organizations do not exist at present, advantage being taken of the experience acquired by the committees referred to.

" The creation of these new committees should be confided to the F. I. T. A. which might perform the task in collaboration with the Institute of International Fertilizer Conferences.

" The Congress recommends that at the next International Fertilizer Congress each country should be allowed to present reports on the important questions of the method of conducting experiments, of the utilization of results achieved and of the organization of experimental work ".

The radio communiqués of the International Institute of Agriculture will be transmitted between 2.45 and 2.52 p. m. on the following days: Thursday, English *and* German; *Saturday*, Spanish; *Tuesday,* Italian *and* French.

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INTERNATIONAL BULLETIN OF PLANT PROTECTION

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DISCOVERIES AND CURRENT EVENTS *

Germany: Further Records of the Colorado Beetle (*Leptinotarsa decemlineata*) in 1938 †

During the period June 14 to July 7, 1938 the Colorado beetle was reported in the following circumscriptions: Birkenfeld (35 communes), Saarlautern (28 communes), Homburg, Kusel and Ottweiler (each 20 communes), Saarbrücken (19 communes), Pirmasens and Saarburg (each 15 communes), Trier and Wadern (each 12 communes), Kreuznach (11 communes), Bernkastel (10 communes), Mannheim (9 communes), Merzig and Müllheim (each 8 communes), Bergzabern, Kaiserslautern, Lörach and St. Wendel (each 7 communes), Aachen, Düren and St. Ingbert (each 6 communes), Emmendingen, Säckingen and Zweibrücken (each 5 communes), Euskirchen, Neustadt, Rockenhausen and Simmern (each 4 communes), Freiburg, Germersheim, Monschau, Prüm and Rheingau (each 3 communes), Bingen, Heidelberg, Ludwigshafen, Rastatt, Waldshut, Wiesbaden and Wittlich (each 2 communes), and lastly Alzey, Bensheim, Bruchsal, Freudenstadt, Geldern, Karlsruhe, Coblenz, Künzelsau, Lindau, Landstuhl, Mayen, Siegkreis, Speyer and Zell (each 1 commune).

Madagascar: Behaviour of *Locusta migratoria* var. *capito* during the Campaign 1937-38 §

Whilst the preceding years had been characterised by an absolute calm as regards locusts, the year 1937, because of various phenomena which were noted, can be considered in Madagascar as the opening of a new period of locust activity.

Till now, it was believed that the outbreak areas of *Locusta migratoria* L. var. *capito* Sauss. were comprised in the semi-desert regions, between the rivers

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the Biologische Reichsanstalt für Land- und Forstwirtschaft, Berlin-Dahlem, official Correspondent of the Institute.

§ Communication from the official Correspondent of the Institute, M. C. Frappa, Director of the Laboratory of Agricultural Entomology (Pasteur Institute) of Antananarivo, Chief of the Central Bureau for Locust Control in Madagascar.

Onilahy to the north and Mandraré to the south, of the Mahafaly and Antandroy districts. Recent observations taken in 1937-38 suggest that this area stretches out more to the north and at least as far as the Mangoky river.

During the last campaign the hatching of the first hoppers was reported in March 1937 at Kiliarivo near Betioky, over several hectares. The hopper bands were rapidly annihilated by spraying of sodium arsenate at 0.8 per cent. More to the north, near Befandriana, bands had been reported near Milomboky, Analatelo and Analamisampy thanks to the dejections they left on their way. Everything suggested that the hatching favoured by the local ecological conditions would occur in these localities at the beginning of the rainy season of 1937. Precautionary measures—allotment of special staff, transport and distribution of equipment, such as barriers, sprayers, arsenicals, provision of the necessary funds— permitted one to await in a fully prepared state the appearance of the hopper bands which took place on January 6, 1938. The destruction of the 988 hopper bands located a short time after hatching required 13,135 days of work. On the whole the Service for locust control intervened in time to insure the protection of the crops. It was however impossible to avoid some occasional damage to the native crops, in particular to maize. The campaign ended on April 20, 1938 in this area, by the appearance of the adults of the last generation.

More to the south an important hatching covering 5,000 hectares near Tranovao-Befamata and 8,000 hectares near Manasina-Beloha was located on March 19, 1938. It was the second generation of hoppers.

Drastic measures were taken without delay by the local administration according to the Antandroy method (beating down of hopper bands towards ditches full of burning branches). Nearly 1,500 days' work were required in this area up to May 15, date when the adults of the last generation appeared.

To sum up, *L. migratoria* var. *capito* has taken in Madagascar during 1937 a sudden new lease of activity. The measures taken have prevented migrations from taking place and in most cases have insured protection of the crops. A control programme for all localities at present threatened has been prepared and will be carried out when the first rains of the next warm season begin.

The Netherlands: Outbreak of the Colorado Beetle in 1938 *

All potato crops within a radius of 4 x 6 km² around the foci of the Colorado beetle (*Leptinotarsa decemlineata*) reported in 1937, were treated with lead arsenate three times in 1938. Two foci were completely destroyed; in the third (Bakel) some adult insects were caught on the plant traps.

For the year 1938 an inspection service was organized with the help of some 2200 young peasants, in a zone covering 15 km. along the southern frontier, but large swarms of the Colorado beetle crossed this zone so that it was necessary to extend considerably the inspected area.

* Communication from the State Phytopathological Service, Wageningen, official Correspondent of the Institute.

The first swarm settled during June, 1938 in the south-west of the country; but the number of adults, eggs and later young larvae collected was small.

In this region, all the potato fields were carefully inspected several times and twice treated, as were also small plots and gardens, with lead arsenate to prevent foci forming.

During July, a second swarm settled more towards the south and south-east of the country. All localities where the insect was reported in the adult or larval stage were treated according to the measures recommended by the International Committee for the mutual study of the control of the Colorado beetle.

The communes where this beetle was reported number 147. In many communes, particularly in the north of the infested zone, attack was limited to only one adult insect or to the larvae of one egg-mass. The zone invaded in 1938 does not exceed 45 km.

Southern Rhodesia: Locust Invasion, 1932-1938 *

Monthly Report No. 67. June, 1938.

Reports of the Red Locust (*Nomadacris septemfasciata*, Serv.) have been relatively infrequent during June probably due to cold weather preventing activity.

Winged swarms described as from 'small' to 'large' have been reported in the districts of Mazoe, Salisbury, Chilimanzi and Melsetter only. The direction of flight varied from east to south the general trend being thus south-easterly.

Some damage to winter wheat has been reported.

Monthly Report No. 68. July, 1938.

Wimged swarms of the Red Locust have been reported in various districts in the northern part of the colony during July, namely Lomagundi, Mazoe, Mrewa, Salisbury and Hartley, and one report refers to Wankie in the extreme west.

The size of the swarms varies from 'small' to 'large'. One swarm which remained in the neighbourhood of Salisbury from the 8th to 12th, was observed to occupy about three hours in passing over. The reports fail to indicate any general trend of direction of flight.

No damage has been reported.

Italian Somaliland: Locusts †

During the months of July and August, 1938 no locusts were reported in the Colony.

* Communication from the official Correspondent of the Institute, Mr. RUPERT W. JACK, F. E. S., Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

† Communication from Dr. LUIGI BOZZI, Chief of the Agricultural Services of Italian Somaliland, Mogadiscio, transmitted to the Institute by the Government of the Colony.

Yugoslavia: Locust Situation and Control Organization in the Country *

The most important locusts in Yugoslavia from the economic point of view are *Dociostaurus maroccanus* and *Calliptamus italicus*; in order of importance these are followed by *Decticus verrucivorus*, *Stetophyma fuscum* and different species of *Stenobothrus*, *Oedipoda*, etc.

Various quite separate parts of the country are subject to invasions of the Moroccan locust (*D. maroccanus*) and the Italian locust (*C. italicus*). These regions are situated in the territories of the following six banovinas:—

(1) Dunavska (North-Eastern Yugoslavia): the districts around the three towns of Velika Kikinda, Novi Bečej and Novi Knjaževac are invaded by the Moroccan locust; the outbreak centres of this locust are on the grazing-lands of the plain.

(2) Vardarska (Southern Yugoslavia): in the districts of Djevdjelia and Ovce Polje the Moroccan locust appears at the same period as the Italian locust; the ground is more uneven and stony than in the North.

(3) Zetska (South-Western Yugoslavia): the district around the town of Podgorica is periodically invaded by *C. italicus:* the ground is stony and rocky; invasions are frequent.

(4) Primorska (Western Yugoslavia): district around the town of Stolac; the same characteristics as the above mentioned district.

(5) Sawska (North-Western Yugoslavia): district of Gospić town: *D. maroccanus*.

(6) Dravska (North-Western Yugoslavia): *C. italicus*.

Article 4 of the Law of 1929 relative to the control of diseases and pests of cultivated plants authorizes the governor of the banovina to proclaim territories invaded by locusts to be such and to organize the control of these insects with the assistance of the agricultural, experiment and control stations.

The State bears half, the banovina and the communes each a quarter of the cost of the campaign. In exceptional cases, the State may advance the total amount, but the banovinas and communes must refund their quotas.

During the last campaign against the Moroccan locust in 1933, under my supervision, 10,000 man-days and 10,812 horse-days were required. In an area divided into three districts, with seven infested communes covering an area of 300,000 hectares a careful survey was made for eggs in the autumn of 1932: 3,000 ha were seriously infested whith a maximum of 1600 and a minimum of 400 egg-pods per square metre. The laying places were marked off, then reproduced on the 1:115,200 map. During the winter of 1932-33, all the material required for the control was supplied, transported and distributed to the communes concerned.

The authorities of the districts and communes prepared a list of workers obliged by law to lend their assistance and the necessary number of workers was assigned in advance to each commune. The area was divided into several

* Communication from the official Correspondent of the Institute Prof. Dr. MIHAILO GRADOJEVIĆ, Director of the Entomological Institute, Zemun, Yugoslavia.

sectors, the sectors into sections, each with a supervisor of operations. The management of the control operations was entrusted to agricultural engineers.

At the end of May the organization, fully prepared, commenced activities. After 33 days of work, 3000 ha had been swept with steel brushes. The hoppers up to the third stage were completely destroyed. In the control of hoppers which had spread to the crops, baits composed of 100 kg of bran, 4 kg of Paris green and molasses water were used. By these means several hundred billion larvae were destroyed during this period. The net gain on this campaign was estimated at 100 million dinars.

With the same system of organization, in 1934 the Italian locust was successfully controlled in the neighbourhood of Podgorica town (Zetska banovina). In 1936, in the neighbourhood of Djevdjelia, Southern Serbia, similar results were obtained. In these two instances, however, chemical methods were preferred to steel brushes, the ground being uneven and stony. Naphtha spraying was also employed against the hoppers.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Italian East Africa. — Three Decrees of the Minister for Italian Africa, dated May 16, 1938, establish and delimit the cotton districts of Cobbò, Auash and Metemma Dongur.

The contract for the organization and administration of each of these three districts, agreed between the Administration of Italian Africa and the concessionary Company stipulates *inter alia* that the latter, as regards phytosanitary questions, both in cultivation and the preparation of the fibre, must comply with the regulations which will be laid down by the Administration of Italian Africa and the 'Ente per il cotone dell'Africa italiana'. (*Bollettino Ufficiale del Ministero dell'Africa Italiana*, Roma, giugno 1938, parte I, n. 6, pp. 1922-1942).

England and Wales. — In consequence of the spread of the Colorado beetle [*Leptinotarsa decemlineata*] into Switzerland, the Importation of Plants (Amendment) Order of 1938 imposes restrictions on the importation from Switzerland of certain kinds of horticultural produce. Similar restrictions are already in force regarding horticultural produce from France, Belgium, Germany and Luxemburg. The new Order came into force on June 13, 1938. (*The Journal of the Ministry of Agriculture*, London, July, 1938, Vol. XLV, No. 4, pp. 404-405).

Australia (Western Australia) * — By Order in Council published in the 'Government Gazette' on May 20, 1938, the disease called fruit fly (*Ceratitis capitata*) shall be and is hereby declared to be a disease to which the provisions of section 8A of the Plant Diseases Act, 1914-1935, shall apply.

* Communication from the official Correspondent of the Institute, Mr. L. J. Newman, Entomologist, Department of Agriculture, Perth, Western Australia.

For the purpose of controlling and eradicating the said disease and for preventing the spread thereof, the due observance of the provisions in this regulation hereinafter contained shall be appropriate steps and measures within the meaning and for the purposes of section 8A and section 8B of the said Act to be taken and adopted by owners and occupiers of orchards to which the said sections relate, that is to say:—

(*A*) In every orchard containing one or more fruit trees or one or more fruit vines, when either under section 8A or under section 8B of the said Act the owner or occupier of such orchard is required to take appropriate steps and measures for controlling and eradicating or for preventing the spread of the disease called fruit fly (*C. capitata*), such owner or occupier shall do or cause to be done the following things, namely:—

(i) gather all fallen fruit from the ground as follows:—

(*a*) Loquats, apricots, peaches, nectarines, plums, figs, pears, guavas, persimmons and quinces—once at least in every 24 hours.

(*b*) Apples, citrus fruits and other fruits not mentioned in the next preceding subparagraph—once at least in every three days;

(ii) destroy by boiling or by some other method approved by an inspector all fruit gathered from the ground as aforesaid and found to be infested with the said disease;

(iii) apply to every fruit tree and to every fruit vine in the orchard having fruit thereon by means of a hand syringe, or a spray pump, or by some other method approved by an inspector, fruit fly bait made in accordance with the formula hereinafter prescribed or in accordance with some other formula as hereinafter mentioned and provided for, and which shall be so applied according to the following directions, namely:—

(*a*) at least one gallon of the fruit fly bait shall be used to every forty fruit trees or to every one hundred fruit vines required to be treated, and so that each fruit tree or each fruit vine is throughly sprayed or treated;

(*b*) the first application of the fruit fly bait shall be made when the fruits on the trees or on the vines (as the case may be) are within six weeks of ripening;

(*c*) after such first application aforesaid further applications shall be made at least once in every six days during the whole of the ripening period; and until the expiration of two weeks after all the ripe fruits shall have been removed or fallen from the said fruit trees or the said fruit vines.

(*B*) The formula for making fruit fly bait as provided for in and for the purposes of paragraph (*A*) of this regulation shall be as follows:—

Sodium fluosilicate	1 ounce.
Sugar	2 ½ lbs.
Water	4 gallons.

Provided that, in lieu of the said formula, any other formula may be used of which the Minister approves as notified in the 'Government Gazette' whilst such notification remains unrevoked by a subsequent notification in the 'Government Gazette'.

Belgium. — By Ministerial Decree of July 26, 1938 every proprietor, lessee, farmer or holder who ascertains on the lands the occupies, whatever the crops grown, the presence of the Colorado beetle (*Leptinotarsa decemlineata*) whether in the form of the adult insect, egg, larva or nymph, is obliged to report the fact immediately to the burgomaster of the commune.

The burgomaster must telegraphically inform the Minister of Agriculture of the first appearance, during the year, of the Colorado beetle in his commune.

The occupant of any land who ascertains the presence of the Colorado beetle in any form whatsoever is obliged to immediately destroy the same.

In the event of those concerned having no means of effective control or when the measures taken are found to be insufficient, the burgomaster may authorize the official destruction of the Colorado beetle throughout his commune.

The provincial governor has the same authority either for the whole province or for any part of it he may designate.

Preventive and control measures may be ordered by the Minister of Agriculture or his deputy, and by the provincial governors at the periods and in the districts they may indicate.

The use of certain products or of certain control methods may be prohibited, regulated or prescribed, either by means of departmental instructions or circulars, or by bulletins, instructions or circulars issued by the special phytopathological Service.

It is prohibited, at all times, and for any purpose whatsoever, to transport or to keep live Colorado beetles.

The transport of the potato haulms for any reason or use whatsoever is prohibited. (*Moniteur Belge*, Bruxelles, 27 juillet 1938, 108e année, nº 208, p. 4769-4770).

Chile. — Decree No. 573 of September 15, 1938 authorizes the import from Ecuador of 'Añera' and 'National' oranges which ripen during the period September to December inclusive. These fruits should comply with the general regulations regarding health certificates required for all plant produce and be dispatched according to the 'Standard' system of packing. On arrival in Chile they will be inspected by the Plant Protection Service and all consignments found to contain larvae of the fruit fly (*Anastrepha* sp.) or any other insect will be refused entry.

The import of avocado pears (*Persea gratissima*) from Ecuador is also authorized. At the time of dispatch, these fruits should be of an even ripeness; they should originate in an area free from anthracnose (*Physalospora perseae*) or in an area where the cankers caused by this fungus no the trees have been almost entirely eradicated and where their removal is being carried out systematically. The fruits should be free from injury caused by anthracnose and not contain any Lepidopterous caterpillars. (*Boletín del Ministerio de Agricultura*, Santiago de Chile, julio-agosto-septiembre 1937, año IV, nº 13, págs. 153 y 154).

Colombia. — In accordance with Decree No. 742 of April 27, 1938, the banana-growing region in the Department of Magdalena is declared a quarantined zone owing to serious infection with Sigtaoka or 'Chamusco' disease (*Cercospora*

musae). The Chief of the Plant Protection Section of the Ministry of Agriculture has therefore been instructed to take suitable measures for safeguarding the plantations.

These measures rank with police and public hygiene regulations and all those to whom they apply are bound to carry out the instructions given them.

By way of immediate preventive treatment the farmers in the infected area are ordered to strip all infected leaves from the banana plants, and to destroy them within 15 days from the date of the above mentioned Decree. These leaves must either be buried in the earth at a depth of not less than 60 cm., or burned, according as the Chief of the Plant Protection Section may decide.

The matting and banana leaves with which the fruit is covered during transport from the plantation to the railway, as also those which are used in the railway trucks in which it is conveyed to the quay of Santa Marta, must be burned or buried without delay in order that no further use may be made of them. (*Diario Oficial*, Bogotá, 28 de mayo de 1938, año LXXIV, núm. 23788, pág. 736).

*** By Decree No. 762 of April 29, 1938, the campaign against the mosaic disease of the sugar cane and for the protection and promotion of the sugar industry, will be entrusted to a technical Commission whose main work will be carried out by means of a Central Sugar-Cane Experiment Station, together with such sub-stations for verification and control as the Ministry of Agriculture may consider advisable.

The Central Station will be at Palmira. Among the studies undertaken there, will be the investigation of sugar cane diseases and pests. (*Ibid.*, págs. 735 y 736).

Belgian Congo. — By Decree No. 129/Agri. of March 30, 1938, cotton growers in the Territories of Kanda-Kanda and Kabinda, in the Province of Lusambo, are required to destroy or have destroyed in their fields the bolls and residues of cotton plants attacked by bollworms and to carry out this operation by the methods and at the periods indicated by the ' territorial ' Service. (*Bulletin Administratif du Congo Belge*, Léopoldville, 10 avril 1938, 27ème année, nº 7, p. 293).

*** The Ordinance No. 52/A. E. of April 5, 1938 determining the quality of bananas exported from the Belgian Congo and the Territory of Ruanda-Urundi establishes *inter alia* that these fruits should belong to the Gros Michel variety of *Musa sapientum*. The bananas should be free from insect damage, the stalks should be sound and the clusters free from all parasites and cryptogamic or other diseases. (*Ibid.*, p. 274-276).

Estonia. — An Ordinance of April 12, 1938 gives a list of the preparations which may be sold for use in the control of plant diseases and pests.

The list is divided into two parts, the first referring to products of foreign brand and the second to those manufactured in Estonia. (*Deutsches Handels-Archiv*, Berlin, 1. Juli 1938, 92. Jahrg., S. 2594).

*** An Ordinance of the same date gives the list of sprayers which may be sold. (*Ibid.*, S. 2594).

United States of America. — Revised rules and regulations governing the movement of plants and plant products into and out of the District of Columbia have been approved on April 27, 1938 and shall be effective on and after April 30, 1938. (*B. E. P. Q. — D. C. Regs.*, [Washington, D. C.], 1938, 4 pp.).

*** By the revision of rules and regulations supplemental to Notice of Quarantine No. 63, on account of the white-pine blister rust (*Cronartium ribicola*), approved on June 1, 1938 and effective on and after July 1, 1938, several changes are made in the restrictions on the interstate movement of five-leaved pines (*Pinus* spp.) and currant and gooseberry plants (*Ribes* and *Grossularia* spp.). (*B. E. P. Q. — Q. 63*, [Washington, D. C.], 1938, 6 pp.).

*** Amendment No. 4 of rules and regulations governing the importation of cotton and cotton wrappings into the United States, in order to prevent the spread of the pink bollworm [*Pectinophora* (*Platyedra*) *gossypiella*], concern the regulation 13 relative to provision for the entry via border ports of cotton lint and linters from Mexico. This amendment has been approved on June 30, 1938 and shall be effective on and after July 1, 1938. (*B. E. P. Q. — Cotton Regs.*, [Washington, D. C.], 1938, 2 pp.).

France. — By Decree of June 17, 1938, an additional credit of 250 million francs from the 1938 budget has been assigned to the Ministry of Agriculture to be distributed among farmers whose crops were damaged by spring frosts in 1938. (*Bulletin de l'Office de Renseignements agricoles*, Paris, 1er juillet 1938, année 1938, nº 13, p. 349-350).

*** A notice to exporters of potatoes to Switzerland, published on June 19, 1938 requires that consignments of French potatoes for Switzerland should be accompanied by a certificate of origin testifying that up to the time of dispatch, the wart disease of the potato [*Synchytrium endobioticum*] or the Colorado beetle [*Leptinotarsa decemlineata*] had not appeared in the areas where the tubers were harvested and that no focus had been reported within a radius of 5 km. for wart disease and 20 km. for the Colorado beetle. (*Ibid.*, p. 373).

India. — The Act No. VI of 1938, assented on March 12, 1938 and which may be called the Destructive Insects and Pests (Amendment) Act, 1938, amends the Destructive Insects and Pests Act, 1914, for certain purposes. (*The Gazette of India*, New Delhi, March 19, 1938, No. 12, Pt. IV, pp. 108-109).

*** In modification of Notification No. F. 116-34-A. of April 8, 1937, by Notification No. F. 46-11/38-A. of March 17, 1938, no fee will be charged for consignments of plants and fruits intended for export when the work of inspection and certification is done at Karachi by an officer stationed at that place. A fee of Rs. 20 will be charged for each consignment only when an officer has to be called from outside Karachi to make the examination. (*Agriculture and Live-stock in India*, Delhi, May, 1938, Vol. VIII, Pt. III, p. 301).

*** By Notification No. F. 408-36-A, of March 18, 1938, in clause (*a*) of rule 11 of the Order published with the Notification No. F. 320/35-A, dated July 20, 1936 [see this *Bulletin*, 1937, No. 5, p. 95], for the words ' otherwise than by sea ' the words ' or otherwise than by sea ' shall be substitued. (*Ibid.*, July, 1938, Pt. IV, p. 459).

Italy. — By Ministerial Decree of May 10, 1938 the provincial association of Palermo for the improvement and development of citrus cultivation, and the provincial association of the same province for the improvement and development of manna production, have been combined into one compulsory association called the provincial association for the cultivation of citrus and ash trees, with headquarters at Palermo. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 1° agosto 1938, anno X, n. 15, pp. 1357-1359).

*** The Ministerial Decree of May 12, 1938 sets up the compulsory association for the Province of Rome for the improvement and development of horticultural, flower and fruit crops. (*Ibid.*, 10 luglio 1938, n. 13, pp. 1025-1027).

*** By Ministerial Decree of May 13, 1938, the intercommunal compulsory association for fruit crops, set up by the Ministerial Decree of July 12, 1935 [see this *Bulletin*, 1935, No. 10, p. 230] with headquarters at Fermo, as from June 1, 1938 will also deal with the improvement and development of horticultural and flower crops. (*Ibid.*, pp. 1027-1029).

*** Five Ministerial Decrees of May 16, 23, 24 and 26, 1938 set up the provincial compulsory association for the improvement and development of horticultural, flower and fruit crops at Bolzano, Enna, Modena, Savona and Trent. (*Ibid.*, 1° agosto 1938, n. 15, pp. 1360-1368).

*** By virtue of Law No. 987 of June 18, 1931 [see this *Bulletin*, 1931, No. 9, p. 166] relative to measures for the protection of cultivated plants and agricultural products, and of modifications of that Law [see this *Bulletin*, 1932, No. 11, p. 185; 1933, No. 3, p. 62; 1936, No 9, p. 201; 1937, No. 6, p. 125; 1938, No. 4, p. 81], the Ministerial Decree of June 16, 1938, sets up a compulsory association for the improvement and development of the cultivation of textile plants in the Province of Matera, with headquarters at Matera. (*Ibid.*, 16 agosto 1938, n. 16, pp. 1456-1458).

A Ministerial Decree of June 18, 1938 establishes the method of control of the European corn borer (*Pyrausta nubilalis*) to be applied in the province of Novara. This method corresponds to that indicated by the Ministerial Decree of June 24, 1937 [see this *Bulletin*, 1937, No. 9, pp. 205-206]. (*Ibidem*, 16 luglio 1938, n. 14, pp. 1282-1283).

*** By Decree of the Minister of Finance, dated June 20, 1938, the application of the exchange duty, at the rate of 0.75 lire per cent., is extended from June 20, 1938 to the parasiticides delivered to the trade as ' Bariorisina ', ' Verderisina ' and ' Fosfurisina '. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 23 luglio 1938, anno 79°, n. 166, pp. 3065-3066).

Latvia. — By Decree of April 29, 1938 the charges for the inspection of plants and parts of plants for import and export have been revised. (*Deutsches Handels-Archiv*, Berlin, 1. August 1938, 92. Jahrg., S. 2951).

*** By Decree of the same date, imported oranges, tangerines, grapefruit, lemons and bananas are exempt from phytosanitary inspection and the relative charges. (*Ibid.*, S. 2951-2952).

Morocco (French Zone of). — By Decree of July 15, 1938 an inquiry is opened with a view to modifying the area of activity of the Syndical Association for the control of plant parasites known as the ' Association syndicale de lutte contre le pou rouge [*Chrysomphalus dictyospermi*] de Foucauld ' [see this *Bulletin* 1937, No. 6, p. 126]. (*Bulletin Officiel*, Rabat, 29 juillet 1938, XXVII[e] année, n° 1344, p. 1033).

Peru. — By a Resolution of February 15, 1938, the removal of grapes from those districts in the Province of Tacna officially declared to be infested with grape phylloxera will be allowed under certain conditions, among which are the following:—

Producers who have sale contracts to fulfil, or who for any other reason desire to transport grapes from infested areas or from other parts of the Republic, must notify the Agricultural Station of their respective districts, stating the quantity of fruit they wish to dispatch or which they have already sold against presentation of the sales-note.

Such notification must be made not later than the last day of February in each year.

The fruit to be dispatched must be thoroughly fumigated in its place of origin, for which purpose the Agricultural Station is establishing a fumigation installation.

All expenses incidental to fumigation, including the remuneration of the persons employed for this purpose, must be defrayed by the parties interested.

After the fruit has been fumigated a certificate to that effect will be issued by the technical staff and the goods must be taken directly to their destination, all further contact with their place of origin being avoided.

The grapes must be perfectly free from any remains of leaves or other parts of the plant. They will be inspected before fumigation and if necessary the owner may be required to remove any superfluous matter.

The fumigation certificate will be valid only for the day on which it is issued and for the quantity of fruit to which it refers.

In order to prevent the unlawful introduction into any district of grapes from infested areas a careful watch will be kept on all grapes in the course of transit, not only by the staff of the Agricultural Station but also by employees in the Deposits and Consignments Office and members of the Civil Guard when on entry duty. (*El Peruano*, Lima, 22 de abril de 1938, año 98, tomo I, trimestre II, núm. 89, pág. 393).

*** A Resolution of May 17, 1938 establishes measures for the control of the peach mildew (*Sphaerotheca pannosa*) in the Arequipa region. (*Ibid.*, 7 de junio de 1938, núm. 127, pág. [565]).

Puerto Rico. — Law No. 14 of April 8, 1938 authorizes the Commissioner for agricultural and commercial questions, on behalf of the importer, to fumigate with carbon bisulphide all banana plants and 'yautías' [edible araceous plants] imported into Puerto Rico, and to promulgate the necessary rules and regulations for the application of the said Law. (*Revista de Agricultura de Puerto Rico*, San Juan, P. R. abril, mayo y junio de 1938, vol. XXX, núm. II, pág. 358).

Reunion. — By Decree No. 471 of April 25, 1938 the Agricultural Service is entrusted with the inspection of plants, agricultural products, soils and composts imported into the Colony or intended for export.

This Service requires of importers certificates of origin and proofs according to the regulations in force, and decides the destination of the products for which entry into the Colony is requested

The action of the Customs Bureau is limited to the storage of the imported products until a decision is taken by the Agricultural Service and to the execution of this decision.

Consignments from the Island of plants and plant products should be accompanied by a certificate from the Service of Phytopathological Inspection testifying that they do not contain any dangerous parasites.

Anyone wishing to export an agricultural product must forward an application to the Chief of the Agricultural Service for the inspection of the product.

This application should be addressed to the Service at least a week previous to the shipment of the goods, and should include the names and addresses of the sender and the consignee, nature of the product, weight, mode of

packing, number of packages and special marks, port of shipment, place of cultivation and name of the grower.

The exporter will be informed of the day of inspection.

The Inspector's travelling expenses are covered by the local administration. (*Révue Agricole de l'Ile de la Réunion*, Saint-Denis, mai 1938, n. sér., 43me année, p. 85-86).

Tunis. — By Decree of June 7, 1938 (9 rabia II 1937), in wine-growing areas infested with grape phylloxera, as delimited by a Decree of the Director of Economic Affairs, the replacement of diseased vines is authorized *inter alia* under the following conditions:—

(1) The infested vines must be uprooted, whatever their condition, immediately after the harvest of the year in which the new vines show the third leaf;

(2) The new vines should be planted with vine-stocks selected from a list established by a Decree of the Director of Economic Affairs. (*Journal Officiel Tunisien*, Tunis, 24 juin 1938, 56e année, nº 50, p. 785-786).

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Prof. ALESSANDRO BRIZI, *Segretario generale dell'Istituto, Direttore responsabile.*

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* * *

Interna ional meetings.

The following international meetings will take place in the near future:

The *Vth. Congrès international de la vigne et du vin* and the *IInd. Congrès médical d'études scientifiques du vin* at Lisbon, October 15 to 23, 1938.

The *Ist. Congrès international du crédit agricole* at Naples, October 18-27, 1938. This Congress is organized under the auspices of the International Federation of Agronomic Technicians and has the following programme:—

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(4) *Agricultural credit and the export of agricultural products.*

(5) *Cooperation in agriculture and the rôle of agricultural credit in cooperative organizations.*

(6) *The work of agronomic technicians in agricultural credit institutions and in their formation.*

The *VIIIth. International Congress of Tropical and Subtropical Agriculture* at Tripoli (Libya) in March 1939. The Congress is organized under the auspices the Ministry of Italian Africa by the International Federation of Agronomic Technicians (F. I. T. A.) of Rome with the collaboration of the Royal Agronomic Institute of Italian Africa of Florence, in agreement with the Association scientifique internationale des pays chauds, of Paris, on the occasion of the XIIIth. Samples Fair of Tripoli.

The *IInd. Congrès international du raisin et du jus de raisin*, which could not be held this year, will take place in Morocco on March 11-18, 1939.

The *VIIth. International Poultry Congress* at Cleveland, Ohio on July 28-August 7, 1939.

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